

Alcoa
Fastening
Systems



Huck BOM[®]

The Highest Strength
Blind Bolt in the World.



BOM® fasteners. The highest strength, highest precision fastening system you'll find anywhere.

The BOM® (Blind, Oversize, Mechanically locked) fasteners from Alcoa Fastening Systems are so strong, one can do the work of up to four ordinary fasteners.

You won't find a more vibration resistant blind bolt, or one that works harder in so many different applications. With its unique push-and-pull installation design, the BOM fastening system is tough enough for military vehicles and equipment, auto suspensions, amusement park rides, rail car assembly, and automatic storage and retrieval racks. Even the most demanding high-tensile application is no match for the strength of the BOM fastening system.

Quick and economical to install and inspect.

Because installing BOM fasteners is so easy, a worker can learn the installation procedure in just minutes, eliminating the need to hire certified welders or specially trained employees. And, because they install from just one side, your labor costs are reduced.

Installations are more accurate than other fasteners of the same kind, because the element of human error is not an issue. In other words, correct installation doesn't depend on operator skill or specialized tools. Plus, chances are you can start using BOM fasteners immediately with your current tools, saving you more money in the long run.

What's more, inspections are quick and easy. Once properly installed, there's no need for torque inspections or x-rays, no matter if the inspection is the next day or 10 years from now. If the pin has installed near flush with the collar, then you know it's right.

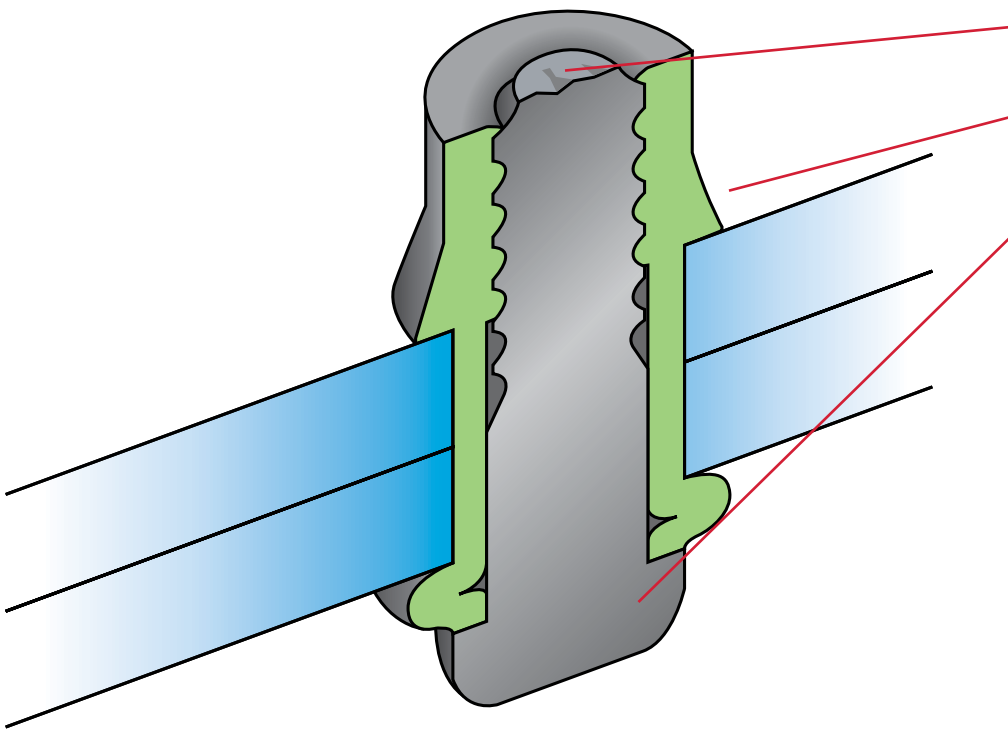
Easy on the ears. And the environment.

Alcoa Fastening Systems use quiet, non-impact tools for lower noise in the plant. And health risks are reduced because operator muscles and joints are not subjected to the constant impact of power tools.

In addition, BOM installation eliminates the hot, noxious vapor filled air of the typical welding environment, ensuring you comply with the most current OSHA standards.

Strong support.

Alcoa Fastening Systems' skilled and knowledgeable technicians – your Huck System Specialists – are ready and waiting with valuable consultation, evaluation, installation assistance, and in-depth staff training capabilities. No other fastening company can match this level of premium, value-added support.

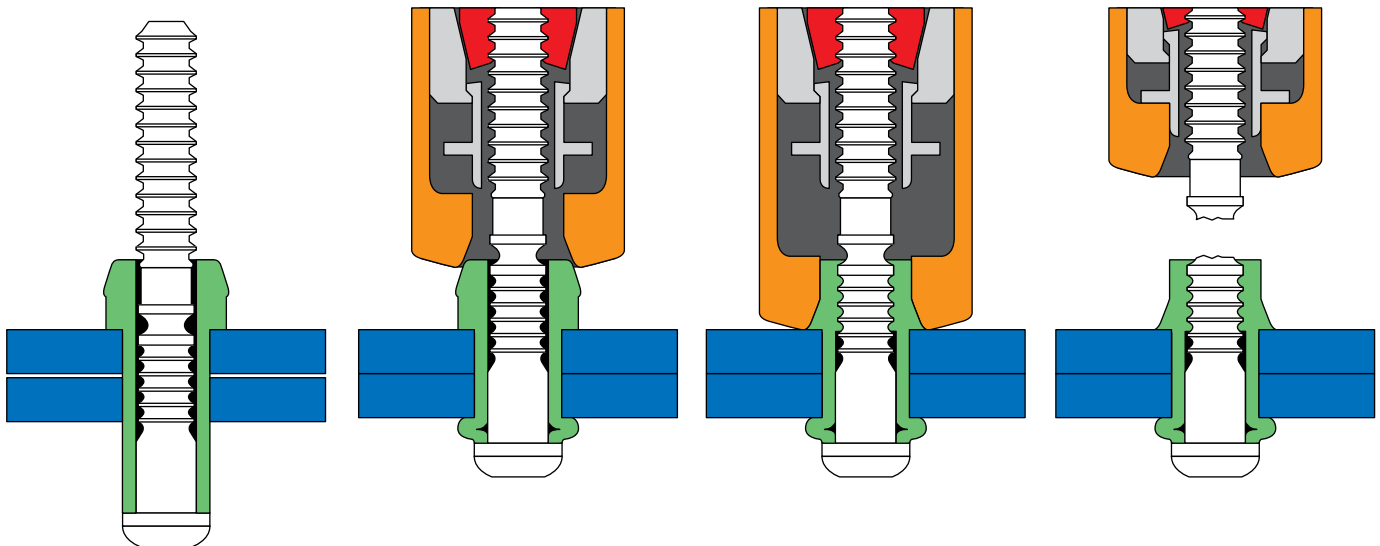


When the pin separates near flush, the BOM fastener is installed correctly.

The BOM fastener does not require surface preparation, grinding or filling after installation.

The unique design of the BOM fastener makes it highly resistant to tampering. And it stands up to elements like water and salt that can induce rust and corrosion.

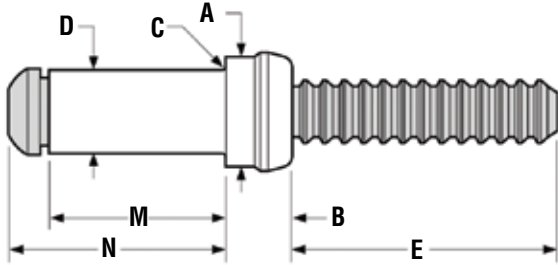
Installation Sequence



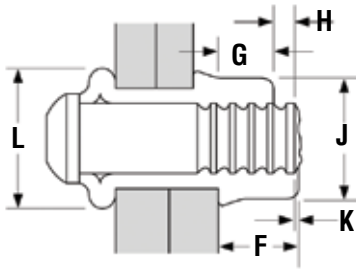
- 1**
The fastener is inserted into the prepared hole.
- 2**
The installation tool is applied to the pintail. When the tool is activated it pulls on the pintail which upsets the sleeve (green), forming a head on the blind side. Sheet gap is removed.
- 3**
The anvil (orange) swages the collar into the locking grooves.
- 4**
Continued pull of the tool causes the pintail to break away which completes the installation cycle.

BOM[®] Blind Bolt

Small Diameter Blind Bolt



Small Diameter Blind Bolt



Fastener Dimensions

Dia.	A	B	C max	D	E min
3/16	.276-.286	.152-.168	.015	.196-.206	.785
1/4	.368-.380	.205-.225	.020	.262-.275	.860
5/16	.468-.478	.266-.278	.025	.332-.346	1.285
3/8	.553-.563	.315-.327	.030	.393-.411	1.230
1/2	.744-.754	.415-.438	.035	.529-.544	1.530
5/8	.931-.941	.507-.545	.040	.662-.685	1.710
3/4	1.115-1.130	.637-.654	.050	.795-.826	2.150

Inspection Data

F nom	G min	H max	J max	K max	L nom
.177	.109	.094	.261	.031	.306
.232	.156	.094	.346	.031	.405
.304	.188	.172	.434	.047	.517
.357	.203	.172	.510	.047	.605
.475	.297	.172	.686	.063	.841
.595	.406	.313	.874	.078	1.038
.722	.438	.313	1.027	.078	1.267

MINIMUM VALUES IN NOMINAL GRIP

Diameter	Shear	Tensile
3/16	2800	1800
1/4	5100	3250
5/16	8050	5200
3/8	11100	7250
1/2	20150	13000
5/8	31900	20500
3/4	45100	29100

Note: These are minimum ultimate shear and tensile strengths, in pounds, of installed fasteners, when tested in a grip equal to or greater than one and one half the fastener diameter.

HOLE PREPARATION DATA

Diameter	Hole Diameter
3/16	.208-.222
1/4	.277-.292
5/16	.348-.368
3/8	.413-.435
1/2	.546-.581
5/8	.687-.728
3/4	.828-.873



Grip Data and Dimensions :

Grip No.	6 (3/16") Diameter			8 (1/4") Diameter			10 (5/16") Diameter			12 (3/8") Diameter		
	Range	M ref	N max	Range	M ref	N max	Range	M ref	N max	Range	M ref	N max
2	.093-.156	.376	.500	.093-.156	.460	.620						
3	.157-.219	.439	.562	.157-.219	.523	.682						
4	.220-.281	.501	.625	.220-.281	.585	.745	.188-.312	.695	.875	.188-.312	.766	.969
5	.282-.344	.564	.687	.282-.344	.648	.807						
6	.345-.406	.626	.750	.345-.406	.710	.870	.313-.437	.820	1.000	.313-.437	.891	1.094
7	.407-.469	.689	.812	.407-.469	.773	.932						
8	.470-.531	.751	.875	.470-.531	.835	.995	.438-.562	.945	1.125	.438-.562	1.016	1.219
9	.532-.594	.814	.937	.532-.594	.898	1.057						
10	.595-.656	.876	1.000	.595-.656	.960	1.120	.563-.687	1.070	1.250	.563-.687	1.141	1.344
11	.657-.719	.939	1.062	.657-.719	1.023	1.182						
12	.720-.781	1.001	1.125	.720-.781	1.085	1.245	.688-.812	1.195	1.375	.688-.812	1.266	1.469
14							.813-.937	1.320	1.500	.813-.937	1.391	1.594
16							.938-1.062	1.445	1.625	.938-1.062	1.516	1.719
18										1.063-1.187	1.641	1.844
20										1.188-1.312	1.766	1.969

Grip Data and Dimensions :

Grip No.	16 (1/2") Diameter			20 (5/8") Diameter			24 (3/4") Diameter		
	Range	M ref	N max	Range	M ref	N max	Range	M ref	N max
4	.251-.375	1.000	1.266	.251-.500	1.213	1.531	.251-.500	1.380	1.750
6	.376-.500	1.125	1.391						
8	.501-.625	1.250	1.516	.501-.750	1.463	1.781	.501-.750	1.630	2.000
10	.626-.750	1.375	1.641						
12	.751-.875	1.500	1.766	.751-1.000	1.713	2.031	.751-1.000	1.880	2.250
14	.876-1.000	1.625	1.891						
16	1.001-1.125	1.750	2.016	1.001-1.250	1.963	2.281	1.001-1.250	2.130	2.500
18	1.126-1.250	1.875	2.141						
20	1.251-1.375	2.000	2.266	1.251-1.500	2.213	2.531			
22	1.376-1.500	2.125	2.391						
24	1.501-1.625	2.250	2.516						

BOM[®] Blind Bolt

Installation Tools

Tool Model	Air Driven Tools				Hydraulic Tools						
	255	256	2025	2480	2580	2600	2620	2620-PT	2624	2628	
Nose Assembly	3/16"	99-1053	99-1053	99-994	99-994	99-1053					
	1/4"	99-830-1	99-830-1			99-830-1					
	5/16"		99-769			99-769**	99-3119				
	3/8"		99-1272*			99-1272*	99-3122				
	1/2"							99-5100	99-5101		
	5/8"									99-5102	99-5102
	3/4"										99-5103

* use only in very low volume repair applications

** requires 123634-2580 steel deflector

Air Driven Tools



Model 255

Weight:	8.8 lbs
Length:	7.1"
Height:	14.9"
Width:	4.6"



Model 2025

Weight:	5.75 lbs
Length:	8.4"
Height:	12.5"
Width:	4.4"



Model 256

Weight:	11.1 lbs
Length:	7.8"
Height:	14.9"
Width:	6.1"

BOM[®] Blind Bolt

Hydraulic Tools



Model 2480

Weight:	2.2 lbs
Length:	8.6"
Height:	6.5"
Width:	1.9"



Model 2580

Weight:	6.6 lbs
Length:	8.4"
Height:	6.5"
Width:	2.2"



Model 2600

Weight:	7.3 lbs
Length:	9.4"
Height:	6.9"
Width:	2.6"



Model	2620	2620-PT
Weight:	9.88 lbs	9.88 lbs
Length:	6.6"	10.2"
Height:	7.0"	7.0"
Width:	2.82"	2.82"



Model 2624

Weight:	17.5 lbs
Length:	7.4"
Height:	7.7"
Width:	3.5"



Model 2628

Weight:	20.5 lbs
Length:	7.74"
Height:	8.12"
Width:	3.87"

ORDERING INFORMATION

Follow the form below to construct a part number for ordering BOM blind fasteners. Refer to the Grip Data chart for grip numbers.

BOM-R (DIAMETER) – (GRIP NUMBER)

Example: **BOM-R8-6** is a BOM blind fastener, 1/4" Diameter, Grip 6

Diameter		Diameter cont.	
3/16	6	1/2	16
1/4	8	5/8	20
5/16	10	3/4	24
3/8	12		

MATERIALS AND FINISHES

		Material	Finish	Lubrication
Sleeve		Carbon Steel	Zinc Plating	Wax Film
Pins	3/16 - 5/16 Dia.	Carbon Steel	None	Wax Film
	3/8 - 3/4 Dia.	Alloy Steel	None	Wax Film



For the Long Haul™

The Benefits of Huck Fastening Systems

Huck fastening systems deliver a number of important benefits, making them the worldwide leader.

- Easy to use – consistent accuracy with little operator training required
- High productivity – reducing installation time by 25% to 50%
- Reduced QC procedures – a visual inspection is sufficient to verify a correct installation
- Consistent high-clamp performance – typically much higher than with conventional fasteners
- Durability – extremely high clamp force retention, with 10% to 20% greater fatigue life than conventional threaded fasteners

Alcoa Fastening Systems Commercial Products: A Global Organization

Alcoa Fastening Systems (AFS) maintains company offices in the United States and Canada, with offices in many other countries. Authorized AFS fastener distributors are also located in many of the world's industrial centers, where they provide a ready source of AFS fasteners, installation tools, tool parts, and application assistance.

Americas

Industrial Fastener Division

8001 Imperial Drive
Waco, TX 76712, USA
P.O. Box 8117
Waco, TX 76714-8117, USA
Tel: 800 388 4825
Fax: 800 798 4825

Installation Tool Division

1 Corporate Drive
Kingston, NY 12401, USA
Tel: 800 278 4825
Fax: 845 334 7333

Indianapolis Distribution

5436 West 78th Street
Indianapolis, IN 46268, USA
Tel: 800 826 2884
Fax: 800 573 2645

Latin America Sales

Avenida Parque Lira
79-402 Tacubaya
MEXICO C P 11850
Tel: 52 55 5515 1776
Fax: 52 55 5277 7564

Mississauga Distribution

6150 Kennedy Road, Unit 10
Mississauga, Ontario L5T-2J4
CANADA
Tel: 905 564 4825
Fax: 905 564 1963

International Locations

India Operations

7th Floor,
Meridien Commercial Tower
Raisina Road,
New Delhi – 110 001
INDIA
Tel. No.: 00 91 11 23717870 – 75
Fax No.: 00 91 11 23717876

Melbourne Operations

20 Stamford Road
Oakleigh, Victoria, 3166
AUSTRALIA
Tel: 61 3 9567 3377
Fax: 61 3 9563 1980

Shanghai Sales

No.1277, Zhongshan Xi Road
Hailuo Building, Room 504
Shanghai, 200051, CHINA
Tel: 86-21-62700949
Fax: 86-21-62701964

Singapore Sales

Blk 194 Pandan Loop
#07-16 Pantech Industrial
Complex 128383, SINGAPORE
Tel: 65 67 78 92 33
Fax: 65 67 78 01 51

Telford Operations

Unit C, Stafford Park 7
Telford, Shropshire TF3, 3BQ
UNITED KINGDOM
Tel: 44 1952 290011
Fax: 44 1952 290459

Your Authorized Distributor

For The Long Haul, The Future of Fastening Technology, The Future of Assembly Technology, The Future of Tooling Technology, and Tools of Productivity are service marks of Alcoa Fastening System. AFS provides technical assistance regarding the use and application of both fasteners and tooling.

NOTICE: The information contained in this publication is only for general guidance with regard to properties of the products shown and/or the means for selecting such products, and is not intended to create any warranty, express, implied, or statutory; all warranties are contained only in AFS's written quotations, acknowledgements, and/or purchase orders. It is recommended that the user secure specific, up-to-date data and information regarding each application and/or use of such products.

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Alcoa Fastening Systems



One Great ConnectionSM